UNITED STATES PATENT AND TRADEMARK OFFICE

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ART UNIT	PAPER NUMBER
2416	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
	10/591,207	WANG ET AL.
Office Action Summary	Examiner	Art Unit	
	MOHAMMAD ANWAR	2416	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on *14 November 2006*.
2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.
   4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) *1-21* is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☒ The drawing(s) filed on *8/31/06* is/are: a)☒ accepted or b)☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☒ All   b)☐ Some * c)☐ None of:
       1.☒ Certified copies of the priority documents have been received.
       2.☐ Certified copies of the priority documents have been received in Application No. _____.
       3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for

all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described
> as set forth in section 102 of this title, if the differences between the subject matter sought to
> be patented and the prior art are such that the subject matter as a whole would have been
> obvious at the time the invention was made to a person having ordinary skill in the art to which
> said subject matter pertains. Patentability shall not be negatived by the manner in which the
> invention was made.

2.   The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1,

148 USPQ 459 (1966), that are applied for establishing a background for

determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

   1.   Determining the scope and contents of the prior art.
   2.   Ascertaining the differences between the prior art and the claims at
          issue.
   3.   Resolving the level of ordinary skill in the pertinent art.
   4.   Considering objective evidence present in the application indicating
          obviousness or nonobviousness.

3.   This application currently names joint inventors. In considering

patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that

the subject matter of the various claims was commonly owned at the time any

inventions covered therein were made absent any evidence to the contrary.

Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor

and invention dates of each claim that was not commonly owned at the time a

later invention was made in order for the examiner to consider the applicability of

35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35

U.S.C. 103(a).

4.   Claims 1, 4-7, 13-14 and 17-18 are rejected under 35 U.S.C. 103(a) as

being unpatentable over Guess et al. (U.S. PGPub. No. 2003/0048746) in view of

Fukushima et al. (U.S. Patent No. 6,038,678).

    For claim 1, Guess et al. disclose a method for protecting a data service

in a Metropolitan Area Transport Network (see paragraph 1 lines 1-4),

comprising: establishing a work path for transporting a service between a source

node and a work destination node of the service in the Metropolitan Area

Transport Network (see Figure 4 (50), paragraph 78 line 2); setting a node other

than the work destination node as a protection destination node (see Figure 4

(52), paragraph 78 line 2); establishing a protection path between the source

node and the protection destination node for protecting the service in the work

path (see Figure 4 (52), paragraph 78 line 2); the work destination node and the

protection destination node detecting respectively the failure of the links

connecting themselves to a data device (see Figure 5 path 50 and 52 connecting

to data devices 56 and 58). Guess et al. disclose all the subject matter but fails to

mention the source node detecting a failure state of links of the work path and

the protection path and a failure state of a node in the links of the work path and

the protection path, if there is the failure, notifying the source node; and

switching the data service in the work path to the protection path by the source

node when the failure state of the link of the work path or the failure state of a

node in the link is detected or a failure state notice of the work destination node

is received. However, Fukushima et al. from a similar field of endeavor disclose

the source node detecting a failure state of links of the work path and the

protection path and a failure state of a node in the links of the work path and the
protection path (see Figure 9, column 4 lines 17-19) ; if there is the failure,
notifying the source node (see column 8 lines 19-24); and switching the data
service in the work path to the protection path by the source node when the
failure state of the link of the work path or the failure state of a node in the link is
detected or a failure state notice of the work destination node is received (see
column 6 lines 59-67, column 7 lines 1-5, column 8 lines 14-19). Thus, it would
have been obvious to one ordinary skill in the art at the time of invention was
made to include Fukushima et al. failure detection scheme into Guess et al.
protection path scheme. The method can be implemented in a network
configuration. The motivation of doing this is to protect data traffic in a working
path as well as protection path (see column 3 lines 25-28).

        For claim 4, Guess et al. disclose all the subject matter but fails to
mention further comprising: when the source node detects that the failure of the
work path has been eliminated or the source node receives a notice that the
failure of the work path has been eliminated, switching the services from the
protection path to the work path. However, Fukushima et al. disclose when the
source node detects that the failure of the work path has been eliminated or the
source node receives a notice that the failure of the work path has been
eliminated, switching the services from the protection path to the work path (see
Figures 7 and 8 where an alarm detection circuit is shown and the switching logic
based on alarm detection. This mechanism is used to switched back and forth
from working path to protection path, also see column 4 lines 62-64). Thus, it

would have been obvious to one ordinary skill in the art at the time of invention was made to include Fukushima et al. failure detection scheme into Guess et al. protection path scheme. The method can be implemented in a network configuration. The motivation of doing this is to protect data traffic in a working path as well as protection path (see column 3 lines 25-28).

For claim 5, Guess et al. disclose all the subject matter but fails to mention further comprising: after the source node switches the work path to the protection path, the source node setting the protection path as the current work path, and setting the work path before the switching as the protection path. However, Fukushima et al. from a similar field of endeavor disclose further comprising: after the source node switches the work path to the protection path, the source node setting the protection path as the current work path, and setting the work path before the switching as the protection path (see column 4 lines 44-45 which says either working path or protection path can be active path). Thus, it would have been obvious to one ordinary skill in the art at the time of invention was made to include Fukushima et al. failure detection scheme into Guess et al. protection path scheme. The method can be implemented in a network configuration. The motivation of doing this is to protect data traffic in a working path as well as protection path (see column 3 lines 25-28).

For claim 6, 13 and 14, Guess et al. disclose wherein the work destination node and the protection destination node are connected to the same data device (see Figure 4 (56) which shows a destination device connected to both working path 50 and protection paths 52).

For claim 7, 17 and 18, Guess et al. disclose wherein the work

destination node and the protection destination node are connected to different

data devices which are connected with each other (see Figure 4 (56, 58) which

shows connection to two different devices).

5.   Claims 2, 11 and 15 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Guess et al. in view of Fukushima et al. as applied to claim 1

above, and further in view of Trudel et al. (U.S. Patent No. 7,450,497) and

Shimano et al. (U.S. Patent No. 6,947,377 B1).

For claim 2, Guess et al. and Fukushima et al. disclose all the subject

matter but fails to mention wherein, the step of switching comprises: one

protection path providing a protection for multiple work paths. However Trudel et

al from a similar field of endeavor disclose wherein, the step of switching

comprises: one protection path providing a protection for multiple work paths

(see column 4 lines 14-17). Thus, it would have been obvious to one ordinary

skill in the art at the time of invention was made to include Trudel et al. 1 for N

protection scheme into Guess et al. protection scheme. The method can be

implemented in the network configuration. The motivation of doing this is to

protect data traffic in working path (see column 3 lines 4-5). Guess et al.,

Fukushima et al. and Trudel et al. disclose all the subject matter but fails to

mention the work path with the highest priority being switched to the protection

path when the multiple work paths are out of work at the same time. However,

Shimano et al. from a similar field of endeavor disclose the work path with the

highest priority being switched to the protection path when the multiple work

paths are out of work at the same time (see column 6 lines 24-44). Thus, it would

have been obvious to one ordinary skill in the art at the time of invention was

made to include Shimano et al. priority scheme into Guess et al., Fukushima et

al. and Trudel et al. protection scheme. The method can be implemented in a

priority byte assignment. The motivation of doing this is deal with abrupt traffic

variations (see column 2 lines 30-33).

     For claim 11, Guess et al. disclose wherein the work destination node

and the protection destination node are connected to the same data device (see

Figure 4 (56) which shows a destination device connected to both working path

50 and protection paths 52).

     For claim 15, Guess et al. disclose wherein the work destination node

and the protection destination node are connected to different data devices which

are connected with each other (see Figure 4 (56, 58) which shows connection to

two different devices).

6.   Claims 3, 12 and 16 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Guess et al. in view of Fukushima et al. as applied to claim 1

above, and further in view of Swinkels et al. (U.S. Patent No. 6,795,394 B1).

     For claim 3, Guess et al. and Fukushima disclose all the subject matter

but fails to mention further comprising: when the work path runs well, the source

node transporting extra data services via the protection path, and when the work

path is switched to the protection path, stopping the extra data services. However

Swinkels et al. from a similar field of endeavor disclose further comprising: when
the work path runs well, the source node transporting extra data services via the
protection path (see column 5 lines 41-43), and when the work path is switched
to the protection path, stopping the extra data services (see column 5 lines 49-
54). Thus, it would have been obvious to one ordinary skill in the art at the time of
invention was made to include Swinkels et al. data scheme into Guess et al. and
Fukushima et al. protection scheme. The method can be implemented in the
network configuration. The motivation of doing this is to use idle protection
bandwidth for extra traffic (see column 2 lines 35-36).

      For claim 12, Guess et al. disclose wherein the work destination node
and the protection destination node are connected to the same data device (see
Figure 4 (56) which shows a destination device connected to both working path
50 and protection paths 52).

      For claim 16, Guess et al. disclose wherein the work destination node
and the protection destination node are connected to different data devices which
are connected with each other (see Figure 4 (56, 58) which shows connection to
two different devices).

7.   Claims 8-10 and 19-21 are rejected under 35 U.S.C. 103(a) as being
unpatentable over Guess et al. in view of Fukushima et al. as applied to claim 1
and 6 above, and further in view of Trudel et al. (U.S. Patent No. 7,450,497 B2).

      For claims 8 and 19, Guess et al. and Fukushima et al. disclose all the
subject matter but fails to mention wherein, the step of notifying the source node

comprises: the work destination node and the protection destination node notifying the source node by means of signaling after detecting a failure state of the link (see column 14 lines 25-30); and further comprising: the work destination node and the protection destination node notifying the source node by means of signaling after detecting a recovery from a failure state. However Trudel et al. from a similar field of endeavor disclose wherein, the step of notifying the source node comprises: the work destination node and the protection destination node notifying the source node by means of signaling after detecting a failure state of the link (see column 14 lines 25-30); and further comprising: the work destination node and the protection destination node notifying the source node by means of signaling after detecting a recovery from a failure state (see column 22 lines 10-16). Thus, it would have been obvious to one ordinary skill in the art at the time of invention was made to include Trudel et al. signaling scheme into Guess et al. and Fukushima et al. protection scheme. The method can be implemented in a signaling protocol. The motivation of doing this is to protect data traffic in working path (see column 3 lines 4-5).

For claims 9 and 20, Guess et al. and Fukushima et al. disclose all the subject matter but fails to mention wherein, the work destination node and the protection destination node adopt an confirmation mechanism when notifying the source node by means of signaling and keep on sending the failure state information to the source node until receiving the confirmation information from the source node. However Trudel et al. from a similar field of endeavor disclose wherein, the work destination node and the protection destination node adopt an

confirmation mechanism when notifying the source node by means of signaling (see column 16 lines 10-25 where ACK/NACK is defined for confirmation mechanism), and keep on sending the failure state information to the source node until receiving the confirmation information from the source node (see column 16 line 19). Thus, it would have been obvious to one ordinary skill in the art at the time of invention was made to include Trudel et al. signaling scheme into Guess et al. and Fukushima et al. protection scheme. The method can be implemented in a signaling protocol. The motivation of doing this is to protect data traffic in working path (see column 3 lines 4-5).

For claims 10 and 21, Guess et al. and Fukushima et al. disclose all the subject matter but fails to mention wherein the signaling comprises: Ethernet Operation Administrative and Maintenance (OAM) signaling and Multiprotocol Label Switching (MPLS) OAM signaling. However Trudel et al. from a similar field of endeavor disclose wherein the signaling comprises: Ethernet Operation Administrative and Maintenance (OAM) signaling and Multiprotocol Label Switching (MPLS) OAM signaling (see column 1 lines 20-24). Thus, it would have been obvious to one ordinary skill in the art at the time of invention was made to include Trudel et al. signaling scheme into Guess et al. and Fukushima et al. protection scheme. The method can be implemented in a signaling protocol. The motivation of doing this is to protect data traffic in working path (see column 3 lines 4-5).

Conclusion

8.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kaspit et al. (U.S. PGPub. No. 2002/0186429) and Odiaka (U.S. Patent No. 6,829,347).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MOHAMMAD ANWAR whose telephone number is (571)270-5641. The examiner can normally be reached on Monday-Thursday, 9am-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Derrick W. Ferris can be reached on 571-272-3123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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